PATENT DOCKET 205,286

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**APPLICANT:** 

STEGER, Carsten

**EXAMINER:** 

SERIAL

NO.:

**ART UNIT:** 

FILED:

FOR:

SYSTEM AND METHOD FOR OBJECT RECOGNITION



#### STATEMENT OF FILING BY EXPRESS MAIL 37 C.F.R. § 1.10

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# INFORMATION DISCLOSURE STATEMENT

Honorable Commissioner of Patents and Trademarks Washington, D.C. 20231

Sir:

This Information Disclosure Statement (hereinafter sometimes referred to as "IDS") is submitted in accordance with 37 C.F.R. §§1.97,1.98, and it is requested that the information set forth in this statement and in the listed documents be considered during the pendency of the above-identified application, and any other application relying on the filing date of the above-identified application or cross-referencing it as a related application.

1. This IDS should be considered, in accordance with 37 C.F.R. §1.97, as it is filed:

(Check one of the boxes opposite A-D)

[X] A. within three months of the filing date of the above-identified national application or within three months of the date of entry of the national stage as set forth in 37 C.F.R. §1.491 in the above-identified international application.

[] B. before the mailing date of a first office action on the merits.
[] C. after the times set forth in (A) and (B) above, but before the mailing date of eithe a final action under 37 C.F.R. §1.113 or a notice of allowance under 37 C.F.R. §1.311, and the necessary statement pursuant to 37 C.F.R. §1.97(e) appears below (see box "i") or the necessary fee is enclosed (see box "ii" below).
(check one of the boxes opposite "i" or "ii" below)
[] i. (check the applicable statement)
[ ] I, the undersigned, hereby state that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
[] I, the undersigned, hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.
[] ii. A check for the fee set forth in 37 C.F.R. §1.17(p), presently believed to be \$ 240.00, is enclosed.
[] D. after the times set forth in (A), (B), and (C) above, but before payment of the issue fee, since Applicant petitions for the consideration of this Information Disclosure Statemen by a petition enclosed herewith pursuant to 37 C.F.R. §1.97(d)(2), a check for the petition fee set forth in 37 C.F.R. §1.17(i), presently believed to be \$ 130.00, is enclosed, and the necessary statement pursuant to 37 C.F.R. §1.97(e) appears below:
(check the applicable statement)
[ ] I, the undersigned, hereby state that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
[] I, the undersigned, hereby state that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge

after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

2. In accordance with 37 C.F.R. §1.98(a)(1), this IDS includes a list on form PTO-1449 of all patents, publications, or other information submitted for consideration by the Office, incorporated into this IDS as an attachment hereto. Pursuant to 37 C.F.R. §1.98(b): (i) each U.S. patent listed is identified by patentee, patent number, and issue date; (ii) each foreign patent or published foreign patent application is identified by the country or patent office which issued the patent or published the application, an appropriate document number, and the publication date indicated on the patent or published application; and (iii) each publication is identified by author (if any), title, relevant pages of the publication, date, and place of publication. A legible copy of each document listed is attached and incorporated into this IDS, except that no copy of any U.S. patent application is included pursuant to 37 C.F.R. §1.98(a)(2)(iii) and except as explained below.

(check the boxes opposite A and/or B and fill in blanks, if appropriate)

	is (are) substantively cumulative to document(s) ce with 37 C.F.R. §1.98(c), only a copy of each of the late
document(s) is (are) attached.	oo waars, c.r. st. so(o), omy a copy of each of the late
	were previously cited by or submitted to the Office in the hare relied upon for an earlier filing date under 35 U.S.
[insert serial numbers and fi	ling dates of prior applications]
1449 from the files of the prior applimade of record in this application	attaching hereto copies of the forms PTO-892 and/or PTG ication(s) and Applicant requests that they be considered a in accordance with 37 C.F.R. §1.98(d). Pursuant to ocuments need not be provided with this IDS.
(check paragraphs 3 and/or 4, if ap	plicable)
[] 3. Document(s) C.F.R. §§1.98(a)(3),1.98(c), it is st	is (are) not in the English language. In accordance with tated that:
(check the applicable stateme	ent(s))
	he document(s) (or of the pertinent portion no concise explanation of their relevance is required, (s

[] English-language equivalent(s) of the document(s)(or of the	e pertinent
portions thereof) which is (are) in fact translation(s) of the document(s) is (are) enc	losed.
[] The attached English-language version of a search report or other action be patent office in a counterpart foreign application which cites document(s) and which the degree of relevance found by the foreign office is submitted to satisfy the required a concise explanation of the relevance of the document(s), (see M.P.E.P., §609, p.	th indicates rement for
[] A concise explanation of the relevance of document(s)as follows:	is set forth
[insert concise explanation of relevance] [] A concise explanation of the relevance of document(s) found on page(s) of the specification.	can be
[] A concise explanation of the relevance of document(s) found on the attached sheet.	can be
[] 4. Other information being provided for the Examiner's consideration for	llows:
[insert other information]	

5. In accordance with 37 C.F.R. §§1.97(g),1.97(h), the filing of this IDS shall not be construed as a representation that a search has been made or as an admission that information cited in this IDS is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b). Unless otherwise indicated, the date of publication indicated for an item is taken from the face of the item and Applicant reserves the right to prove that the date of publication is in fact different.

6. Please charge any deficiency or other fees or credit any refund or overpayment to Deposit Account No. 01-0035.

Respectfully submitted,

Thomas E. Spath

Attorney for Applicant Registration No. 25,928

ABELMAN, FRAYNE & SCHWAB 150 East 42nd Street New York, NY 10017-5612 (212) 949-9022

### FORM PTO-1449 (MODIFIED)

LIST OF PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT

Atty Docket No: 205,286

Unknown

Serial No: Applicant:

STEGER, Carsten

Filing Date:

Group:

DOCUMENTO					
DOCUMENTO	DATE		NAME	CLASS/SUBCLASS	FILING DATE IF APPROPRIATI
972,359	20 NOV 1	990	Silver et al	. 364,728.05	. =
550,933	27 AUG 1	996	Stetten	382/199	Ĕ,, <u> </u>
631,981	20 MAY 1	997	Rao	382/278	
005,978	21 DEC 1	999	Garakani	382/218	- 56 =
023,530	08 FEB 2	000	Wilson	382/219	31040
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			TITLE,		DATE
EPO		Office Lett	er/Search Report		07 MAR 01
Hashimoto:		Information Computers i Journals. N pgs. 78-87,	of Contour Points n Japan, US, Scrip ew York Vol. 23, N XP000334342	" Systems & ta Technical	
Cambridge Uni	versity Press		_		1988-92
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Lisa Gottesfe	ld Brown	_		_	
	REF NO AUTHOR, EPO  Hashimoto:  Cambridge Uni Shang-Hong La Ming Fang  Carsten Stege	550,933 27 AUG 1631,981 20 MAY 1605,978 21 DEC 16023,530 08 FEB 260 FOR DOCUMENTO DATE  REF NO AUTHOR, EPO Hashimoto:  Cambridge University Press Shang-Hong Lai &	### 27 AUG 1996  ### 631,981	550,933 27 AUG 1996 Stetten 631,981 20 MAY 1997 Rao 005,978 21 DEC 1999 Garakani 023,530 08 FEB 2000 Wilson  FOREIGN PATENT DOCUMENTS  DOCUMENTO DATE COUNTRY  OTHER DOCUMENTS  REF NO AUTHOR, TITLE, EPO Office Letter/Search Report  Hashimoto: High-Speed Template Matching Information of Contour Points Computers in Japan, US, Scrip Journals. New York Vol. 23, N pgs. 78-87, XP000334342 ISSN: 0882-1666, Chapters 2,5  Cambridge University Press Numerical Recipes In C: The A Scientific Computing (ISSN-52  Shang-Hong Lai & An accurate and Fast Pattern Algorithm for Automated Visua Real-Time Imaging 5, 3-14 (19)  Carsten Steger An Unbiased Detector of Curvi Structures  Lisa Gottesfeld Brown A Survey of Image Registration	550,933 27 AUG 1996 Stetten 382/199 631,981 20 MAY 1997 Rao 382/278 005,978 21 DEC 1999 Garakani 382/218 023,530 08 FEB 2000 Wilson 382/219  FOREIGN PATENT DOCUMENTS  DOCUMENTO DATE COUNTRY CLASS/SUBCLAS  OTHER DOCUMENTS  REF NO AUTHOR, TITLE,  EPO Office Letter/Search Report  Hashimoto: High-Speed Template Matching Algorithm Using Information of Contour Points" Systems & Computers in Japan, US, Scripta Technical Journals. New York Vol. 23, No. 9, 1992, pgs. 78-87, XP000334342 ISSN: 0882-1666, Chapters 2,5  Cambridge University Press Numerical Recipes In C: The Art of Scientific Computing (ISSN-521-43108-5) Shang-Hong Lai & An accurate and Fast Pattern Localization Algorithm for Automated Visual Inspection; Real-Time Imaging 5, 3-14 (1999)  Carsten Steger An Unbiased Detector of Curvilinear Structures

**Examiner:** Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

#### FORM PTO-1449 (MODIFIED)

LIST OF PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT

Atty Docket No: 205,286

C NO: 2

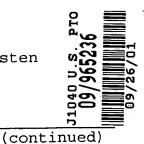
Serial No: Applicant:

STEGER, Carsten

Filing Date:

Group:

OTHER DOCUMENTS



FW 43 4131EB		OTHER DOCUMENTS	(Continued)
EXAMINER INITIAL	REF NO AUTHOR, TITLE, DATE, PERTII	NENTPAGES, ETC.	
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8.	William J. Rucklidge	Efficiently Locating Objects Using the Hausdorff Distance; Int'l Journal of Computer Vision 24(3), pgs. 251-270	
9.	D.H. Ballard	Generalizing The Hough Transform To Detect arbitrary Shapes; Pattern Recognitio	n 23 SEP 80
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11	. Hartley, Richard & Zisserman, Andrew	Multiple View Geometry in Computer Vision; Cambridge Press	N/A
12	. Canny, John	A Computational Approach to Edge Detection; reprinted from IEEE Transactions on Pattern Analysis and Machine Intelligence.	NOV 1986
13	. Andreas Busch	Fast Recognition of Lines in Digital Images Without User-Supplied Parameters; Institut fur Angewandte Geodosiei	N/A

Hierarchical Chamfer Matching: A Parametric Edge Matching Algorithm; Transactions on Analysis and Machine Intelligence, Vol. 10,

Examiner

14. Bunilla Borgefors

Date Considered

No. 6

NOV 1988